

**Notice of Allowability**

Application No.

09/638,491

Applicant(s)

FELDMAN, MICHAEL

Examiner

Todd Ingberg

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2193

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/10/206.
2. ☒ The allowed claim(s) is/are 28-34 and 36-55.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**TODD INGBERG**  
**PRIMARY EXAMINER**

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The title of the application has been amended as follows:

**COMPONENT DEVELOPMENT WITH AUTONOMOUS AND COMPILED  
COMPONENTS TO IMPLEMENT AND CONSUME SERVICES WITH COMPONENTS  
OPERATE IN EDIT AND RUN MODE**

## REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance:

Independent claim 28 is representative of the independent claims.

An architecture for developing a distributed information system the architecture comprising: a component development tool for generating and storing in a computer readable form a plurality of autonomous components that implement and consume services; a system development tool for defining, storing in computer readable form, a plurality of component instances based on the plurality of components, configuring the plurality of component instances, and defining, storing in computer readable form, and hosting links between component instances, without requiring writing of code; and an engine software program to provide a dynamic run-time environment for hosting the plurality of component instances and supporting communication between component instances based upon the defined .

The Applicant argued against the Template reference, " The main differences between the Template Software system and the present system will be provided. One of the primary differences in the present system is that component development (compiling components that are built to our specification) is done separately from system development. In practice, components that were developed and compiled five years ago can still be used in new systems, and no further compiling needs to take place for the new system, because system development does not involve compiling. In fact, from the system developer's perspective the only entities that exist in the system are component instances and links. Any of these can be added or deleted at any time without compiling. Template Software does not allow this functionality." The Examiner's response was that the Template product only does this in part amended claims and supporting arguments point out the edit and run modes are able to update component instances. In viewing the Dardinski Patent US 7,089,530 B1 priority date of May 17, 1999. Components are able to be updated but by parameters through a source or sink operation.

Furthermore, the Applicant argued, " Another difference is that in the present system component instances and links exist as live objects during both design-time and run-time. During design-time, live component instances and links interact with the system development tool; during run-time they interact with the engine software program. In addition, component instance behavior is different during design-time than it is at run-time. During design-time component instances operate in an edit mode during which configuration settings are modified. During run-time component instances operate in a run mode to perform their desired functionality. In either case the component instances are living during design-time and no compiling is involved during either development or deployment. When deployed, the same component instance comes to live in the run-time environment (engine software program). This approach provides for much greater flexibility and extensibility as to the pre-defined behavior of the components.", This is the benefit of the prior distinction as described above.

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Applicant continues with, “Another difference is that system development in the present system can be performed with only three steps: (1) create component instances, (2) define links between component instances, and (3) deploy the metadata that defines component instances and links to the run-time environment. These steps do not have to be performed in a fixed sequence. That is, as soon as two component instances are created a link can be defined between them. More component instances and links can be added, deleted, or modified even after deployment. This cannot be said of the Template Software system.

Although Template Software does allow interpreted routing rules that can be changed without compiling, Template Software cannot change an entire application without compiling. In the present system any component instances and links can be changed, after the system is developed and deployed, without compiling. Since component instances and links are the only entities that are defined when creating a system, this approach provides a higher level of flexibility. Therefore, it can be seen that significant differences exist between the present system and the system of Template Software, Inc.”. This argument although present is not clearly and concisely present in the claimed invention.

#### **Arguments Directed Specifically Toward Independent claims 28 and 49**

Applicant’s specific arguments toward independent claims over the Template product include, “With that foundation, we now turn to an examination of the claims as amended. Claims 28 and 49 have been amended to explicitly recite features that are not taught by the Template Software system. The claims identify three elements of the architecture for developing a distributed information system. The first element is a component development tool. The second element is a system development tool. The third element is an engine software program. Each of these elements perform their own unique functions within the system.

First, the component development tool generates a plurality of autonomous and compiled components that implement and consume services, the components capable of operating in an edit mode and a run mode. The two modes of operation are further discussed below. However, it is important to note that the component development tool generates a plurality of autonomous and compiled components that are later used by other elements of the system. Before being used by these other elements of the system, however, they are fully compiled and autonomous.

The Template Software system does not teach each of the features of the component development tool as recited in claims 28 and 49. For example, Template Software does not teach a component development tool for generating a plurality of autonomous and compiled components, the components capable of operating in an edit mode and a run mode. Rather, the tasks of the Template Software system operate only in a single mode. Furthermore, the Template Software system does not teach components that are autonomous and compiled before being used by the system development tool or the engine run time. This feature is identified in the claims by the fact that the component development tool generates the components, which are later instantiated and operated as defined.

Second, the system development tool defines and hosts a plurality of component instances. The component instances are capable of operating in the edit mode while hosted by the system development tool. After the component has been generated and compiled by the system development tool, it can then be instantiated by the system development tool. The autonomous and compiled component instance then operates in the edit mode, a mode that allows a user of

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the system development tool to configure the component instance as desired. In addition, links between component instances are defined with the system development tool. It is important to recognize that a user of the system development tool does not need to write any code to perform these tasks.

The Template Software system does not teach each of the features of the system development tool as recited in claims 28 and 49. For example, the Template Software system does not perform all of the features of the system development tool without requiring writing of code. Rather, the Template Software system does require the writing of code which is then compiled to build an application. Evidence of this can be found for example at page 7-2 of the "Using the WFT Development Environment" document, where it defines the term "build" as "to compile the source files for a software development effort into object files that can be executed." On page 7-14 of the same document it describes how to issue the command to build (compile) the application before it is deployed.

Third, the engine software program provides a dynamic run-time environment for hosting the plurality of component instances. The component instances operate in the run mode while hosted by the engine software program. In this mode the component instances perform their desired functionality within the distributed information system. The engine software program also supports communication between component instances based upon the defined links. The defined links are defined in the system development tool without requiring the writing of any code.

The Template Software system does not teach each of the claimed elements of the engine software program as recited in claims 28 and 49. For example, the Template software system does not teach a component that operates in a run mode, distinct from an edit mode, while being hosted by the engine software program.

Thus, it can be seen that one of the benefits over the Template Software system is that once components have been generated by the component development tool, no further compiling or code writing must take place. The components are completely self-sufficient (autonomous) and operational. They are capable of operating in two different modes, depending on whether they are being hosted by the system development tool or by the engine software program." these arguments for the most part are cumulative. However, when reviewing the Dardinski Patent the ability to establish and configure connections between objects and validate component to component pairing is present (Dardinski, Abstract). Dardinski's approach is to update components which are parameterized objects with a sink or source operation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

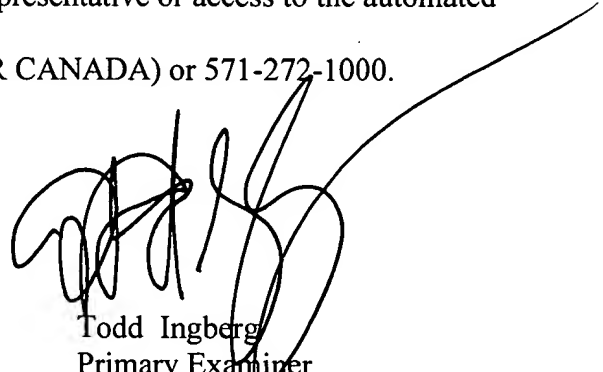
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### ***Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd Ingberg whose telephone number is (571) 272-3723. The examiner can normally be reached on during the work week..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Todd Ingberg  
Primary Examiner  
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